ABSTRACT OF THE DISCLOSURE

A laser marking apparatus and method for marking the surface of a semiconductor chip are described herein. A laser beam is directed to a location on the surface of the chip where a laser reactive material, such as a pigment containing epoxy, is present. The heat associated with the laser beam causes the laser reactive material to fuse to the surface of the chip, creating a visibly distinct mark in contrast to the rest of the surface of the chip. Only reactive material contacted by the laser fuses to the chip surface, and the remaining residue on the non-irradiated portion can be readily removed.